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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

FLEMING, FRITZ M

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/924,024	LARSON ET AL.
	Examiner	Art Unit
	Fritz M Fleming	2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 30 September 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-19 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.


 FRITZ FLEMING
 PRIMARY EXAMINER
 GROUP 2100

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

The new grounds of rejection involve the application of Doustou II to Ben-Meir and Pignolet to reject each independent claim, as necessitated by applicants' amendment.

The amendments have also necessitated new grounds of rejection under 112.

Prior to addressing the points raised by applicants, the examiner would like to briefly review the limitations of the independent claims 1,15. Each preamble mentions "a server system" (no specific server functionality or structure stated) and then recites a plurality of subsystems/cards (no specific server functionality or structure stated), a power supply (no specific server functionality or structure stated), a server management card (no specific server functionality or structure stated). Claim 9 similarly only mentions in the preamble "a server system" and the rest of the claim never again mentions a server or any server specific structure or functionality. Thus the only times a "server" is mentioned is just in name only. The independent claims are devoid of any more defined server specific structure or functionality that would tend to limit the scope of competent prior art to that of servers and servers alone. In fact, the bulk of the independent claims deals with power supply and management of subsystems and cards, and thus any and all references that teach card/subsystem based power management are properly combinable, when it comes to these types of features. Since

Ben-Meir teaches the server terminology, then combination with a server that is also card based with power management (i.e. Pignolet) is deemed to be proper.

The examiner disagrees with points raised by applicants. First of all, the examiner admitted rather clearly in the record that the combination of Ben-Meir and Pignolet lack the at least one host processor/hard disk/fan cards. Thus the amended claims introduce elements of claim 8, clearly requiring the addition of the previously relied upon Doustou II reference.

The examiner disagrees with the applicants' allegation that there is no motivation or suggestion to combine the references. First of all, applicants rely upon Ben-Meir column 1, lines 10-17 for providing rationale to rule out combination. A careful reading of column 1, lines 10-17 reveals that Ben-Meir is merely setting forth a definition of a hub and mentions that a hub connects, amongst other things, users, servers, and devices. There is absolutely no mention in these 7 lines that would explicitly exclude or teach against the combination as set forth by the examiner. Instead of addressing the rationale and motivation to combine, as presented by the examiner in somewhat great detail, the applicants chose to simply state that there is no motivation. The examiner simply cannot be persuaded if applicants do not point to specifics of the positions raised by the examiner. Turning to the citation of **KARSTEN**, the examiner has provided a teaching and motivation to combine, that being in the form of applying the benefits of the card based power management system of Ben-Meir to all card based computer system. The examiner feels that since both Ben-Meir and Pignolet are card based computer systems, then the teachings of one are applicable to another, as Pignolet

(column 1) mentions a backplane, modules plugged therein, (column 2) a provided power management system, and power management system 40 (columns 17 and 18) that can detect the presence of all system components in order to determine if there are enough converters 38 to power the server 10. Applicants are of the opinion that the teachings of a hub are not applicable to a server and vice-versa. This type of reasoning is flawed, as the underlying teachings of each reference need to be evaluated for any commonality and desirability of combination. The examiner clearly pointed out in the record that Ben-Meir is a card based power managed hub and that the difference between what is claimed and Ben-Meir is a matter of terminology, as for example, claim 1 requires a server system with a plurality of subsystems and a power supply and a server management card. The examiner clearly admitted that it was this terminology (server specific) that was missing from Ben-Meir, and then used the Pignolet reference of a card based, power managed server to fill in the gaps. Thus, at a very top level, Ben-Meir and Pignolet differ as the former is a hub and the latter is a server. Thus the question for proper combinability to be answered is: why would one combine the two? Applicants urge that since one is a hub and the other is a server, then the two cannot be combined. This would be analogous to not being able to apply the teachings of a car engine to a truck engine, a laptop power supply to a desktop computer supply, a television audio circuit to a radio audio circuit, simply for the fact that the two items are not the same. But Ben-Meir and Pignolet are both in the field of computer network devices, more specifically to card based, power managed computer network devices. The examiner sees this as being sufficiently related to justify the application of the

teachings of a hub to a server or of a server to a hub, when both contain commonality in the form of card based power management. Thus the examiner maintains that the rationale and motivation to combine are proper and suggested by the art, as the teachings of card based power management systems are applicable to hubs, switches, servers, computers---in fact any computer system that is card based and benefits from power management. Since applicants have not rebutted the technical merits or specific rationale provided by the examiner, the examiner is not persuaded.

Regarding claim 7, applicants offer no specifics, just dependence upon claim 1, as grounds for patentability. This is not persuasive and does not argue the merits of claim 7.

Independent claim 9 is argued for lacking the amended material, which requires a new grounds of rejection. However, the point is raised if each and every card would have the associated memory. The answer is yes, and found in Ben-Meir in the desirable to operate the device within a given power budget, and thus each managed module has a memory providing power requirements (i.e. column 4, lines 13-25). Clearly the use of managed modules allows for better power management per the criteria spanning columns 4 and 5, and thus suggests the placing of a memory on other cards/modules like fans and disks and processors so that the power management is most effective.

Regarding claim 14, applicants offer no specifics, just dependence upon claim 9, as grounds for patentability. This is not persuasive and does not argue the merits of claim 14.

Regarding the application of De Nicolo, applicants again argue that such is not proper, as it does not mention a server. However, the proper criteria for combinability is that of De Nicolo providing specifics of the type of memory used in card based power supply information and power management. Note especially the abstract and column 1, which address that multicard modular electronics are common in the computer industry, and that such are backplane based. Thus this is the criteria for combinability, and not each device is a server, and thus the references are properly combinable.

Claims 2-6 and 10-13 are not argued beyond dependence on claims 1 and 9. Dependence alone is not a persuasive argument.

Regarding claim 15, the analysis and argument for claim 1 apply.

Claims 16-19 are not argued beyond dependence on claim 15. Dependence alone is not a persuasive argument.

Regarding claim 8 and the application of Doustou (no applicable to the amended independent claims), Doustou II is a server and per column 1, line 4, relates to computers in general, and teaches the use of fan, disc and processor modules. Since Ben-Meir and Pignolet are properly combinable, then the teachings of Doustou II are properly combinable therewith, due to the modular nature of the computer components.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites "the mass storage device" which should be "the at least one mass storage device" in order to agree in number with claim 1.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1,7-9,14,are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-Meir et al. (B-M) in view of Pignolet and Doustou II.

B-M clearly shows the majority of the claimed elements. Use is specified in switching hubs or concentrators, therefore not the same as the claimed "server system". It is to be noted that the claims are mainly devoid of server specific structure or functionality. Thus the difference in claimed subject matter is mainly one of semantic terminology and not structure. But since a switching hub or concentrator is not anticipatory of a "server system", an obviousness type rejection is made, relying upon a secondary reference for semantic terminology. Also, B-M uses the term "module" to describe the elements that are plugged into the backplane. For purposes of an obviousness rejection, the only difference, to the extent claimed, between a "module" and "card" is that of terminology, as the claims do not provide any structure that would distinguish a "module" of B-M from a card, as both are plugged into backplanes. In fact, applicants use the terminology "cards/modules 300A-G" at line 23 of page 3, making the equivalence of terminology, and hence proper obvious subject matter when it comes to B-M's "modules". Furthermore, please note the plurality of subsystems (10) that each include a non-volatile memory device (20) which include, but are not limited to, the amount of power each module requires for the respective power rails (i.e. col. 3, lines 58-65, which is the same as the claimed "power usage information"), and which are disclosed to be EEPROM 20 at column 9, line 22. Note also the use of a power supply

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unit(s) at 4, each of which use the status/type input 96 to tell the system the number and type of power supply elements, so a proper power budget can be formed (col. 7, lines 1-6). An RCM (redundant controller module) is coupled to the subsystems and power supplies via the backplane (i.e. col. 7, lines 24-44), so that the power usage data from each managed module (10) is collected, from which, after an initial hub reset or powerup, an initial power budget is determined, based upon the data passed to the RCM via the 96 input regarding the type and capacity of each power supply. Then the RCM gathers the power usage information from each module (10) per columns 9-12, specifically mentioning column 11 and the RCM maintained power budget in the form of a running assessment used to determine if a slot containing a module (10—power disabled or hot inserted) can be safely power enabled. Thus what is lacking is the terminology “server system” and “server management card”, noting again, that the hub and RMC are the same, functionally speaking regarding the claimed limitations, as the “server system/management card”. Also lacking is the amended plurality of subsystems to include the processor card and the mass storage device.

Pignolet in the same field of computer power management, shows a backplane/card/module-based data server (10) with a power management system (40), thus showing that data servers (i.e. server systems) are power managed.

Doustou, in the same art of computer and server structure, shows it is old and well known to use processor and disc modules, as well as fan packs in servers (i.e. column 1, lines 42-52). Note for example the disc module 139, processor modules 165 and fan modules 47.

Therefore it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify B-M per the teachings of Pignolet and Doustou II so as to have a "server system" with a "server management card" in place of the hub and RMC, so as to be able to increase the types of computer equipment to benefit from the power management schemes of B-M, again noting that the limitations as claimed, only require a change in terminology, which is provided by Pignolet and so as to have modules for specific server elements such as the processor, disk and fans, and to thereby benefit from the power management applied to such, as Doustou has clearly shown that the modular structure of such is old and well known in the server architecture art. The combination is further strengthened by applicants use of "card/module" thereby equating cards to modules, and thus enabling an obviousness type rejection, as the overall teachings apply to the power management of all cards and modules within a computer system, based upon the idea of an overall power budget. Thus it would have been obvious to one having ordinary skill in the art, to apply the teachings of Pignolet and Doustou II to B-M in order to achieve a power managed, card based server system, as the benefits of power management of B-M are applicable to all card based computer systems.

As a computer system is taught, the method of operating such is rejected using the same rationale, as the structure discussed above operates in the analogous method. Hence the method steps are rendered obvious under the same analysis.

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5. Claims 2-6,10-13,15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over B-M in view of Pignolet and Doustou II as applied to claims 1,7-9,14 above, and further in view of De Nicolo '666 (D-N).

As detailed above, B-M in view of Pignolet and Doustou II teach the bulk of what is claimed, save an explicit mention of the power supply unit(s) including an associated memory for storing the power capacity information, although some sort of equivalent is needed by B-M in order to properly calculate the power budget based upon the power supply inputs at 96.

Thus D-N supplies a technical basis for the required passing of power supply information, that being the use of power supply modules (18,20,22) which may have stored in it a relatively permanent memory having a three or more bit ID that can be read by the power supervisor 14 over link 16, which includes a code for the model and/or the maximum ability to supply power or current. See columns 2-3 in which a power budget is built up, based upon power supply unit ID. Also in column 3, each power supply module can have an EEPROM with power information to include output voltages, amongst other things.

Thus it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the combined teachings of B-M and Pignolet and Doustou II per the teachings of D-N for the express purpose of using an EEPROM in the power supply units so as to provide power supply output information to a supervisory controller, and at the same time avoid reliance on software tables in the supervisory unit and to allow for subsequent creation of power supply modules, being rationale explicitly

taught by D-N at column 3, lines 6-31. Thus in combination, the RMC will then obtain the power supply data from the power supply EEPROMs so as to create the power budget therefrom, wherein the power available from the power supplies is compared against the power required by the modules, such that the modules are selectively powered up based upon the overall power budget, as discussed in B-M in detail above. Again, of specific relevance in B-M is the decision to power up or not power up a managed module in column 11, lines 1-19.

Conclusion

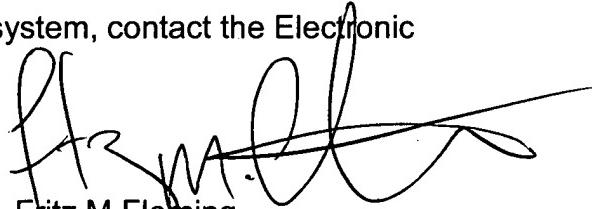
4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz M Fleming whose telephone number is 571-272-4145. The examiner can normally be reached on M-F, 0600-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Fritz M. Fleming
Primary Examiner
Art Unit 2182

fmf